

REMARKS

Claims 3-6, 8, 10, 11, 14 and 24-27 were pending in this application. Claims 24-27 are cancelled herein. Applicants expressly reserve the right to pursue protection of any or all of the subject matter of the cancelled claims in a subsequent application. Claims 8 and 14 have been amended. Three paragraph(s) of the specification and the abstract have also been amended. Support for amendments to the claims, specification and abstract is discussed below, where necessary. No new matter is introduced by these amendments.

As required by the Office action, a complete set of replacement drawings (## drawing sheets in total) are also included, but no amendments have been made to the drawing.

The requested amendments to the claims, specification and abstract are believed to remove all objections to the specification and place the claims in a condition for allowance. Therefore, Applicants respectfully submit that entry of this amendment after final is permissible.

Upon entry of this amendment **claims 3-6, 8, 10, 11, and 14 will be pending in this application.** Entry of the amendment and consideration of the pending claims is respectfully requested.

Telephone Interview:

Applicants thank Examiner Kerr for the courtesy of a telephone interview with their representative, Debra A. Gordon, Ph.D., on August 28, 2003. During the telephone conference, the objections to the specification and abstract, and the §112 first and second paragraph rejections were discussed. Applicants' representative provided proposed amendments to the specification, abstract and claims for discussion purposes.

Examiner Kerr agreed that the provided amendment to the abstract, which identified the source species, *Taxus cuspidata*, and the full enzyme names for TAX1 and TAX6, was sufficient to overcome the objection to the abstract; provided that the common designations, *i.e.*, "TAX1" and "TAX6," were also included.

The Examiner further approved amendments to page 7 and page 33 of the specification, which removed the word “transacylase” in reference to TAX6 and, where appropriate (*i.e.*, on page 7), substituted the term “O-acetyl transferase.” Moreover, the Examiner explained that the definitions of “acyltransferase” and “transacylase” on page 15 of the specification would be acceptable if the foregoing amendments on page 7 and 33 were made.

Finally, the Examiner agreed that amendments to claims 8 and 14 that recited, in relevant part, “a protein having O-acetyl transferase activity, wherein the protein uses as a substrate 10-deacetylbaccatin III” would put these claims in a condition for allowance (pending approval by the Examiner’s supervisor).

Applicants thank Examiner Kerr for her many useful suggestions and helpful input. Applicants believe this Amendment reflects those suggestions and input.

Drawings:

Applicants thank the Examiner for entering substitute drawings of Figures 4 and 6. The Office action requires (at page 3, paragraph 4) a complete set of formal drawings. Thirty three (33) sheets of drawings are attached to this Amendment. The attached drawing sheets are intended to replace all of the drawings previously submitted in this application.

Sequence Listing:

Applicants thank the Examiner for acknowledging that the application is in full compliance with the sequence rules.

Objections to the Specification:

The specification has been objected to because the abstract allegedly does not describe the disclosed subject matter. Applicants traverse. However, to facilitate prosecution of the application, the abstract has been amended to recite, in relevant part, the source species, *Taxus cuspidata*, and the full enzyme names for TAX1 and TAX6 together with the common designations for those enzymes. Support for the designation “taxadienol 5-O-acetyl

transacylase" for TAX1 is found, *e.g.*, at page 24, line 24. Support for the designation "10-deacetylba^ccatin III-10-O-acetyl transferase" for TAX6 is found, *e.g.*, in Table II on page 21, and at page 35, line 11.

The above-described amendments were approved by the Examiner in the August 28, 2003 telephone interview and conform to the suggestions in the Office action (see, page 5, continuation of paragraph 12). Thus, Applicants request that the objection be withdrawn.

The specification has been objected to for allegedly being "confusing in its varied use of the enzyme name for . . . TAX6." Applicants traverse. However, to facilitate prosecution of the application, pages 7 and 33 of the specification have been amended to clarify references to TAX6, as approved by the Examiner during the telephone interview and as suggested in the Office action (see page 5, continuation of paragraph 12). During the telephone interview, Examiner Kerr explained that objection (c) on page 5 of the Office action (regarding page 15 of the specification) would be moot and need not be separately addressed if the foregoing amendments were made to page 7 and 33.

In view of the amendments to page 7 and 33 of the specification, Applicants request that the objection be withdrawn.

Claim Objections:

Claim 24 is objected to for having improper punctuation. Claim 24 has been cancelled herein. Thus, this objection is moot, and Applicants request that it be withdrawn.

Claim Rejections under 35 U.S.C. §112, second paragraph:

Claims 8,10, 11, 14, 24, and 26-27 have been rejected under 35 U.S.C. §112, second paragraph as allegedly being indefinite for the activity of a transacylase. Applicants traverse this rejection for the reasons set forth in the Amendment and Reply to Office Action, filed April 22, 2003.

To further prosecution of the application, however, Applicants have cancelled claims 26-27 and amended claims 8 and 14 to recite, in relevant part, "... a protein having O-acetyl transferase activity, wherein the protein uses as a substrate 10-deacetylbaccatin III." This amendment is incorporated into dependent claims 10 and 11. In the August 28, 2003 telephone interview, the Examiner indicated that this claim language was sufficiently definite to overcome this rejection; thus, Applicants request that the rejection be withdrawn.

Claims 24 and 26-27 have been rejected under 35 U.S.C. §112, second paragraph as allegedly being indefinite for reciting the phrase "conservative amino acid substitutions." Claims 24 and 26-27 have been cancelled. Thus, this rejection is moot, and Applicants request that it be withdrawn.

Claim Rejections under 35 U.S.C. §112, first paragraph:

Claims 8, 10, 11, 14, 24, and 26-27 have been rejected under 35 U.S.C. §112, first paragraph (written description) because the claims allegedly do not recite a clear function, and the activity allegedly is not specific. Applicants traverse this rejection for the reasons set forth in the Amendment and Reply to Office Action, filed April 22, 2003.

Claims 24 and 26-27 have been cancelled. Thus, the rejection is moot with respect to those claims, and Applicants request that it be withdrawn.

To further prosecution of claims 8, 10, 11 and 14, however, Applicants have amended claims 8 and 14 to recite, in relevant part, "... a protein having O-acetyl transferase activity, wherein the protein uses as a substrate 10-deacetylbaccatin III." This amendment is incorporated into dependent claims 10 and 11. In the August 28, 2003 telephone interview, the Examiner indicated that this claim language was sufficiently clear and specific to overcome this rejection; thus, Applicants request that the rejection be withdrawn.

Claim Rejections under 35 U.S.C. §103:

Claims 24 and 26-27 have been rejected under 35 U.S.C. §103 as allegedly being unpatentable over Menhard *et al.*, *Phytochemistry*, 50:763-774, March 1999 ("Menhard") or

Zocher *et al.*, *Biochem. Biophys. Res. Comm.*, 229:16-20, 1996 (“Zocher”), either in view of GenBank Accession Number AF456342; Matsudaira, *Meth. Enzymol.*, 182:602-613, 1990 (“Matsudaira”); Wozney, *Meth. Enzymol.*, 182:738-751, 1990 (“Wozney”); or Maniatis *et al.*, *Molecular Cloning: A Laboratory Manual*, Cold Spring Harbor, 1982 (“Maniatis”). Applicants traverse this rejection for the reasons set forth in the Amendment and Reply to Office Action, filed April 22, 2003. However, to further prosecution of the application, claims 24 and 26-27 have been cancelled. Therefore, this rejection is moot, and Applicants request that it be withdrawn.

CONCLUSION

It is respectfully submitted that the present claims are in a condition for allowance. If it may further issuance of these claims, the Examiner is invited to call the undersigned at the telephone number listed below.

Respectfully submitted,

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